

REMARKS

In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. This amendment is believed to be fully responsive to all issues raised in the Office Action mailed
5 January 29, 2004.

Drawing Amendments

Submitted herewith are formal drawings addressing all issues raised in the Office Action.

Specification Amendments

10 The specification has been amended to recite the applications from which priority is claimed.

The Action asserts that the present title is not descriptive and requests a new title. Applicants disagree, but will consider a new title suggested by the Examiner.

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Claim Objections

The Action objects to claims 1, 2, and 6, and requests that the word "the" be removed from the phrase "the at least one port" or "the port". Applicants contend that there is adequate antecedent basis to support the
20 use of the word "the" in the claims, and request a clarification of the objection.

Claim Rejections

Rejections Under 35 U.S.C. §103

Claims 1-16 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,260,945 to Rodeheffer (hereinafter, "the '945 patent") in view of U.S. Patent Application Publication No. 2002/0034178 to Schmidt, et al. (hereinafter "the '178 application").

Applicant respectfully traverses these rejections.

To establish a *prima facie* case of obviousness under 35 U.S.C. §103, all claim limitations must be disclosed or suggested by the cited references.
10 See, MPEP 2143.03. The '945 patent, alone or in combination with the '178 application fails to teach or disclose every limitation recited in claims 1 and 9. Therefore, the '945 patent, alone or in combination with the '178 application, cannot establish a *prima facie* case of obviousness.

Independent claim 1 explicitly recites the limitation of *preferentially routing exchanges over a port of the at least one port having a status value selected from the group of active and normal when a port having such status exists and a target node of the exchange is reachable over that port.*
15 *Similarly, claim 9 explicitly recites the limitation of preferentially assigning exchanges to ports having a status value selected from the group of active and normal when at least one port having such status exists and a target*
20 *node of the exchange is reachable over that port.*

The Action asserts that the '945 patent discloses this limitation, but provides no citation to the text of the '945 patent to support the assertion. Applicant disagrees. A close inspection of the '945 patent reveals that the
25 '945 patent neither discloses nor suggests *preferentially routing exchanges*

over a port of the at least one port having a status value selected from the group of active and normal when a port having such status exists and a target node of the exchange is reachable over that port, as recited in claim 1, or preferentially assigning exchanges to ports having a status value selected
5 from the group of active and normal when at least one port having such status exists and a target node of the exchange is reachable over that port, as recited in claim 9. Therefore, the '945 patent cannot establish a *prima facie* case of obviousness of claims 1 and 9. Accordingly, Applicants request the rejection of claims 1 and 9 under 35 U.S.C. §103(a) be
10 withdrawn.

Dependent claims 2-8 and 10-16 depend from independent claims 1-9 and are allowable by virtue of this dependency. See, MPEP 2143.03. In addition, claims 2-8 and 10-16 recite limitations neither disclosed nor suggested by the '945 patent, alone or in combination with the '178
15 application.

Applicants specifically traverse the rejection of claims 4 and 12 issued in the Action. Claim 4, which depends from claim 3, recites the limitation that *the machine readable instructions for determining that a port having an associated status of probationary has encountered excessive errors includes*
20 *instructions of ignoring errors detected within a predetermined period of time of the port seeing a network login attempt made by a second node of the network.* Claim 12, which depends from claim 11, recites the limitation of *determining that a port having an associated status of probationary has encountered excessive errors ignores at least some errors detected within a*

predetermined period of time of the port seeing a network login attempt made by a second node of the network.

The Action asserts that the '945 patent teaches these limitations, and cites column 5, lines 26-61 to support the assertion. Applicants disagree.

5 The cited text reads as follows:

10 When the system is first powered on, the skeptic defines a set of policy parameters and sends a "BROKEN" signal to the system reconfiguration program (step 200). Then it moves to the DEAD state (step 202). When in the DEAD state, "BROKEN" signals received by the skeptic are ignored (step 204), since they provide no new information. A "WORKING" signal, causes the skeptic to start a wait timer (step 206), and to move into the WAIT state (step 208). The duration of the wait timer is calculated by a formula described below. If the
15 skeptic receives a "BROKEN" signal and returns to the DEAD state before the wait timer expires, the timer is stopped (step 210).

20 While in the WAIT state, "WORKING" signals received by the skeptic are ignored (step 212), since they provide no new information.

The skeptic responds to intermittent failures by maintaining a level of skepticism about the subordinate object. The skepticism level is kept in an auxiliary variable called LEVEL. The skepticism level is used to compute WTIME, the
25 duration set on the wait timer, according to the formula:

$$WTIME = WBASE + WMULT \times 2^{LEVEL}$$

30 where WBASE and WMULT are policy parameters. A policy parameter MAXLEVEL establishes an upper limit on skepticism.

35 When the wait timer expires, the skeptic sends a "WORKING" signal to the system reconfiguration program, starts a good timer and moves to the GOOD state (steps 214 and 216). This is the only way the skeptic can get to the GOOD state.

40 While in the GOOD state, "WORKING" signals received by the skeptic are ignored (step 218), since they provide no new information.

Contrary to the assertion in the Action, the cited text neither discloses nor suggests *ignoring errors detected within a predetermined period of time*

of the port seeing a network login attempt made by a second node of the network, as recited in claims 4 and 12. Therefore, the rejection of claims 4 and 12 is improper and should be withdrawn.

Applicants specifically traverse the rejection of claims 5 and 13 issued in the Action. Claims 5 and 13 each recite the limitation of *taking laser diodes of a port of the at least one port offline when status associated with that port is changed to failed, and for placing those laser diodes online when said status is changed to a status selected from the group consisting of active, normal, and probationary.*

The Action asserts that the '945 patent teaches these limitations, and cites column 4, line 60 through column 5, line 25 to support the assertion.

Applicants disagree. The cited text reads as follows:

The coding violation detector 168 detects static on the communication link. For example, coding violations can result from connecting or disconnecting the link cable, from a cable that is too long for good transmission, or from a nearby electric motor. As with other types of errors, isolated violations should be ignored but a burst of violations is a significant error. The violation detector checks the number of violations during successive test periods, each about 170 milliseconds long, checks the number of violations during each test period, and declares a fault only if a threshold violation rate is exceeded. The permitted number of violations depends on whether the skeptic says the link is working or broken. If the link is working (according to the skeptic 146), three errors are permitted per test period, but if the link is broken no errors are permitted. The more strict rule for broken links insures that no link will recover unless it can pass the entire skeptic recovery time without a single coding violation, while occasional violations on working links are ignored.

Referring to FIG. 5, the skeptic program 146 is a state machine with auxiliary variables (e.g., level, wtime, gtime), timers, and policy parameters. The three states for the skeptic are State=DEAD, which means that the link is broken, State=WAIT, which means that the link is working but the skeptic is delaying for a while before passing on that

5 information, and State=GOOD, which means that the link is working and the skeptic has concurred. Thus, transitions from GOOD to DEAD, due to detection of a broken link, are transmitted by the skeptic immediately. But transitions from DEAD to GOOD are delayed for a variable period of time, to help ensure that the link is working consistently before passing that information on to the system.

Contrary to the assertion in the Action, the cited text neither discloses
10 nor suggests *taking laser diodes of a port of the at least one port offline when status associated with that port is changed to failed, and for placing those laser diodes online when said status is changed to a status selected from the group consisting of active, normal, and probationary, as recited in claims 5 and 13. Therefore, the rejection of claims 5 and 13 is improper and*
15 *should be withdrawn.*

Applicants specifically traverse the rejection of claims 6 and 14 issued in the Action. Claims 6 and 14 each recite the limitations of *conducting login attempts over each port having online laser diodes, determining target nodes reachable through each port, and recording in the memory system identities*
20 *of target nodes reachable through each port.* The Action asserts that the '945 patent teaches these limitations, and cites column 5, lines 12-61 to support the assertion. Applicants disagree. The cited text, all of which is excerpted above, neither discloses nor suggests *conducting login attempts over each port having online laser diodes, determining target nodes*
25 *reachable through each port, and recording in the memory system identities of target nodes reachable through each port,* as recited in claims 6 and 14. Therefore, the rejection of claims 6 and 14 is improper and should be withdrawn.

Applicants specifically traverse the rejection of claims 8 and 16 issued in the Action. Claims 8 and 16 each recite the limitation of *testing a port for repair if that port has failed status, an exchange to a particular target node of the target nodes is pending, and the particular target node is not reachable*
5 *through any other port already having an associated status selected from the group consisting of probationary, normal and active.*

The Action asserts that the '945 patent teaches these limitations, and cites column 6, line 51 through column 7, line 13 to support the assertion.

Applicants disagree. The cited text reads as follows:

10 A third common failure mode occurs on marginal links. The error rate on a marginal link is usually very data dependent: it is much higher when the link is carrying packets than when it is idle. This results in such a link failing soon after it recovers, but then having no further faults until it recovers
15 again. The skepticism level increases over time until it reaches its maximum value, MAXLEVEL, which is set to twenty in the preferred embodiment, at which point the wait time is about seventeen minutes. Depending on what the desired long term failure rate is for such links, the MAXLEVEL and WMULT
20 parameters can be set accordingly. For instance, a MAXLEVEL of twenty-five will result in a maximum wait time of about 9.3 hours.

25 Consider how the skeptic fulfills the design requirements. (1) A good history is represented by a low skepticism level. In this case, the skeptic delays a minimum time in WAIT state, and consequently the filtered object recovers soon after the subordinate object recovers. (2) The
30 worst case long-term average failure rate of the filtered object results when the skeptic spends the minimum time in the GOOD state required to forgive the lowest level of skepticism. The bound can be proved using a counting argument on the number of failures and observing that at sufficiently high
skepticism levels the wait time exceeds the lowest level time to
35 forgive. (3) A subordinate object that tends to fail again soon after the filtered object recovers will tend to increase the skepticism level. (4) If the subordinate object remains working, eventually all skepticism will be forgiven.

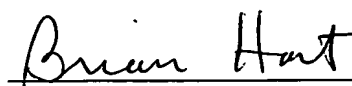
Contrary to the assertion in the Action, the cited text neither discloses nor suggests *testing a port for repair if that port has failed status, an exchange to a particular target node of the target nodes is pending, and the particular target node is not reachable through any other port already having*
5 *an associated status selected from the group consisting of probationary, normal and active*, as recited in claims 8 and 16. Therefore, the rejection of claims 8 and 16 is improper and should be withdrawn.

CONCLUSION

Claims 1-16 are believed to be in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of the present application. Should any issue remain that prevents immediate allowance of the application, the Examiner is encouraged to contact the undersigned attorney to discuss the unresolved issue.

Respectfully Submitted,
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10 Dated: 4/29/04



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